

**REMARKS**

The pending claims (1-24) were rejected under 35 U.S.C. §103(a) in the Office Action mailed February 18, 2004. Various claims were also objected to because of informalities.

For the two reasons set forth below, the Examiner's claim rejections under 35 U.S.C. §103(a) was improper and should be withdrawn. As for the objections, the above-identified claim amendments place the claims in condition for allowance.

In particular, claims 1, 3-9, 11, 13, 14 and 17-23 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Pat. No. 5,138,615 (hereafter "Lamport") in view of U.S. Pat. No. 6,111,858 (hereafter "Greaves"). Claims 2, 10, 12 and 24 were reject under §103(a) as being unpatentablbe over Lamport and Greaves in view of U.S. Pat. No. 5,436,886 (hereafter "McGill"). Claims 15 and 16 were rejected under §103(a) over Lamport and Greaves in view of U.S. Pat. No. 6,530,032 (hereafter "Shew").

The objected-to claims are claims 5, 8, 9, 11, 17, 20 – 23. They were objected to because of informalities cited on page 2 of the Office Action.

All of the Examiner's claim objections are believed to have been addressed in the above-identified amendments. For the reasons set forth below, the claims are allowable over the cited art.

As for the amendments, the Applicants submit that the amendments are not narrowing amendments. Rather, the amendments were made to clarify typographical errors and matters of form. The Applicants therefore state for the record that the amendments should not give rise to a prosecution estoppel under *Festo*. If the Examiner contends that the amendments are narrowing and would give rise to a *Festo* estoppel, the Examiner is asked to specifically explain in the next Office Action, how and why he contends that the amendments are in fact narrowing.

*The claims are allowable under §103(a) for two different reasons.*

1. Greaves does not teach data re-direction over an alternate path. The claims are therefore not obvious in view of Lamport and Greaves, or any other reference in combination with Greaves.

In rejecting the claims under §103, the Examiner relied on Lamport as ostensibly teaching all of the limitations of the claims except the re-direction of data messages over an alternate path through a data network. The Examiner cited column 17, lines 54-67 and column 18, lines 1-12 of Greaves, U.S. Pat. No. 6,111,858 as teaching the reconfiguration of a network

to allow data messages to be sent over an alternate path. The Examiner asserted that it would have been obvious to combine Lamport and Greaves and that the claim limitations could be found by combining these two references.

The Applicants respectfully disagree.

Passages of Greaves cited by the Examiner have been carefully studied and determined to be wholly lacking any teaching of data message re-direction. In fact, Greaves does not teach data message re-direction.

Column 17, lines 54-67 of Greaves, which was cited by the Examiner, reads as follows:

If a switch 130 fails or if a user detaches a switch 130, an entire branch of spanning tree 310 may disappear and all switches 130 and end stations 140 attached to the faulty switch 130 will become unavailable for control purposes, even though they may continue to carry their current data stream. External controller 110 detects failures such as these and attempts to resolve these situations either by reconfiguring the network or by notifying the user.

To detect switch 130 failure, external controller 110 periodically transmits "ping" command cells to all devices within interconnected mesh 105. This does not include some dumb end devices which will not respond to ping cells, as is discussed in greater detail below. Indeed, some of these devices may be half-duplex. Each switch 130 and end station

As explained in column 18, lines 1-12, re-configuring a home area network, as stated in line 61 above, is not data message re-direction as claimed in the pending claims. Notice also that Greaves does not explain anywhere, *how* to reconfigure a home area network. As explained in column 18, lines 1-12, non-responsive end stations are removed from the controller's map of interconnected mesh 105.

Column 18, lines 1-12, which was also cited by the Examiner, reads as follows:

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140 responds to a ping command cell by returning a "pong" command cell to external controller 110. A nonce scheme is again used to associate pong command cells with ping command cells. If a device, switch 130 or end station 140, does not respond within a specified period of time, external controller 110 will assume that the device is no longer operational. After a reasonable retry limit has expired, external controller 110 will remove the device from its internal map of interconnected mesh 105, including spanning tree 310. External controller 110 will also free any resources associated with the missing or faulty device, such as virtual connections.

The plain language of these passages show that Greaves does not show or suggest data message re-direction over an alternate path as claimed in the pending claims. The text of column 18, lines 4-9 states that if a device in the data network is non-responsive, the non-responsive device is simply removed from a list of available devices.

There is no teaching of data redirection over an alternate path. Greaves does not render the pending claims obvious. The rejection of the claims based on Greaves was improper and should be withdrawn.

2. A §103 rejection requires some teaching, motivation or suggestion to combine two or more references. No one of ordinary skill in the art would ever consider using the teachings of Greaves to provide the functionality claimed in the pending claims.

As the Examiner knows, to reject claims under §103(a) as being obvious in light of two or more references, there must be some teaching, suggestion or motivation to combine the cited references. Stated alternatively, a rejection under §103(a) requires a motivation or teaching to combine the references that are relied upon by the Examiner to reject the claims.

Paraphrased, the pending claims are directed to methods of re-routing data messages through switching systems and/or switching networks upon the failure of either a switch or a link. The claimed methods require a re-direction of data messages by an upstream switch upon the occurrence of either a switch failure or a link failure. Such functionality requires powerful and flexible switching systems.

In contrast to the relatively-complex functionality required of switches that are needed to perform the claimed methods, Greaves states in column 3, lines 51-56 that an object of the invention is to provide a reliable yet *low cost* ATM home area network or HAN, i.e., a *simple* ATM network. Greaves goes on to state that such a network would provide ATM network capability, yet be “inexpensive enough to be installed in residential environments.”

Greaves, col. 3, lines 52-56 reads as follows:

Therefore, a need persists for a reliable, yet low-cost, ATM HAN. Such a network would provide the service capability of conventional ATM networks and be able to support the full panoply of emerging multimedia applications for the home, but be inexpensive enough to be installed in residential environments. 55

In comparison to the inexpensive HAN taught by Greaves, a switching system that could provide re-direction as claimed by the Applicants would need to be far more complex, i.e., much more expensive, than the systems required by Greaves. In other words, *no one* of ordinary skill in the art would be led to combine the teachings of Greaves to provide the functionality of data message re-direction as claimed in the pending claims. The rejection of the claims under §103 as being obvious in light of Greaves with Lamport was improper.

Greaves is replete with references to low cost and limited capability switches being used to implement an ATM network for the home. In particular, column 7, lines 42-55 teach using “low-cost, fully-hardware switches...and end stations...by banishing all control software to...[an] external controller.” Such a controller is taught in column 7, lines 61-63 to be a home computer. The Applicants submit that a “fully-hardware” switch as taught by Greaves would be incapable of performing the claimed functions.

Column 8, lines 1 –10 of Greaves suggests that the switches 130 and end stations 140 taught by Greaves do not fully support all ATM functionality. Column 9, lines 1-3 state that end stations are communicated with using permanent virtual circuits. Such circuits would limit data message re-direction. Column 9, lines 24-26 state that each device in a home area network is addressed using an address defined by a device’s connection relative to a control point. Such an addressing scheme would preclude re-configuring the network in the event of a device or link failure. Column 11, lines 16-26 teach that number of switches in the network is limited. Such a limitation is wholly contrary to the flexibility provided by re-direction using the method claimed by the Applicants.

In sum, there is absolutely no teaching or suggestion in Greaves to provide data message re-direction. In fact, the switching systems taught by Greaves are believed to be incapable of providing the functionality claimed by the Applicants.

*Rejecting the claims under §103 was improper*

The claim rejections under §103 should be withdrawn for two reasons. First, Greaves does not show or suggest data re-direction. Its combination with the other cited references therefore does not render the claims in valid. Secondly, no one of ordinary skill in the art would ever consider using a combination of simple, i.e., limited capability switches as taught by Greaves, to accomplish the methods claimed by the Applicants.

The Examiner's combination of Greaves and Lamport was an improper basis upon which to reject claims 1, 3-9, 11, 13, 14 and 17-23 under §103. The rejection of these claims should be withdrawn.


Dependent claims 2, 10, 12 and 24 also include the limitations of the independent claims and therefore claim data message re-direction. These claims were also rejected based on what Greaves allegedly taught. The rejection of these claims was therefore also improper and should be withdrawn.

Finally, claims 15 and 16 were also rejected based on Greaves' allegedly teaching data message re-direction. For the reasons set forth above, the rejection of these claims should also be withdrawn.

Conclusion

For the reasons set forth above, the applicant respectfully requests the claim rejections be withdrawn and that the claims be allowed to issue forthwith.

Respectfully submitted,

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